

Day 63 - 18/01/2023

Q. Balancing Weight

No play and eating all day makes your belly fat. This happened to Manish during the lockdown. His weight before the lockdown was w_1 kg (measured on the most accurate hospital machine) and after M months of lockdown, when he measured his weight at home (on a regular scale, which can be inaccurate), he got the result that his weight was w_2 kg ($w_2 > w_1$). Scientific research in all growing kids shows that their weights increase by a value between x_1 and x_2 kg (inclusive) per month, but not necessarily the same value each month. Manish assumes that he is a growing kid. Tell him whether his home scale could be giving correct results.

Input

The first line of the input contains a single integer T denoting the number of test cases. The description of T test cases follows.

The first and only line of each test case contains five space-separated integers w_1 , w_2 , x_1 , x_2 and M .

Output

For each test case, print a single line containing the integer 1 if the result shown by the scale can be correct or 0 if it cannot.

Sample Input 1

```
5
1 2 1 2 2
2 4 1 2 2
4 8 1 2 2
5 8 1 2 2
1 100 1 2 2
```

Sample Output 1

```
0
1
1
1
0
```

main.py

```
t = int(input())

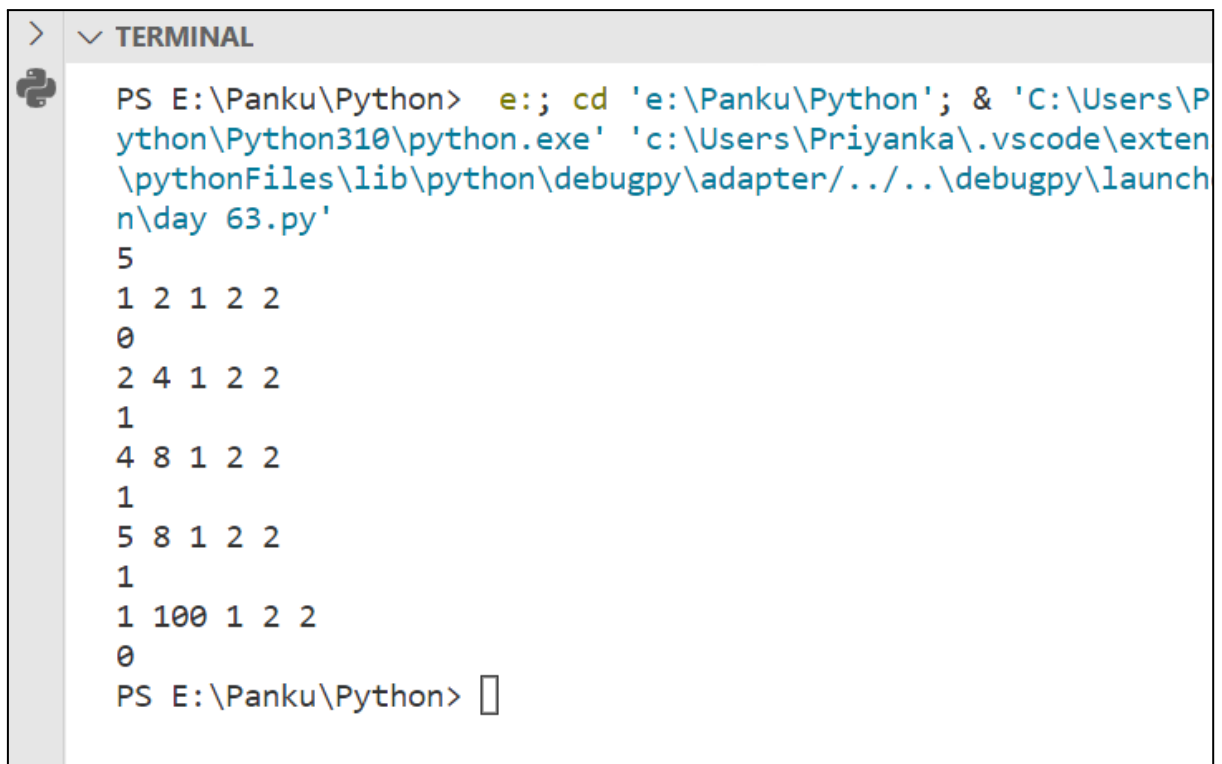
for i in range(t):
    w1, w2, x1, x2, m = map(int, input().split(" "))

    h = w2 - w1
    s1 = x1 * m
    s2 = x2 * m

    if (h >= s1 and h <= s2):
        print("1")

    else:
        print("0")
```

output



```
> TERMINAL
PS E:\Panku\Python> e:; cd 'e:\Panku\Python'; & 'C:\Users\Panku\Python\Python310\python.exe' 'c:\Users\Priyanka\.vscode\extensions\pythonFiles\lib\python\debugpy\adapter\..\..\debugpy\launch\day 63.py'
5
1 2 1 2 2
0
2 4 1 2 2
1
4 8 1 2 2
1
5 8 1 2 2
1
1 100 1 2 2
0
PS E:\Panku\Python> 
```